

Mineral Industry Surveys

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NICKEL IN OCTOBER 2005

Reported domestic nickel consumption in October, on a daily average basis, was slightly less than that in September, according to the U.S. Geological Survey. Daily average nickel consumption of cathodes, pellets, briquets, powders, and ferronickel for stainless steel production was 39.6 metric tons per day (t/d). This consumption figure is currently being reviewed and is expected to be revised significantly upward in a subsequent report. Consumption of >99.8% nickel metal to make superalloys (such as INCONEL 718 and Waspaloy) increased by 5% from September levels, on a daily average basis. Consumption of nickel to make corrosion-resistant, less stress-resistant nickel-base alloys (such as INCONEL 600 and Nickel 200) increased by 4% on a daily average basis. Sales to plating companies averaged 31.5 t/d, about 3% less than September sales of 32.5 t/d.

On October 31, U.S. consumer stocks of cathode, pellets, briquets, and powders totaled 1,440 metric tons (t), down slightly from both the 1,460 t for September 30 and the 1,450 t reported for December 31, 2004. Stocks in London Metal Exchange (LME) warehouses totaled 18,420 t on October 31, 37% greater than 13,488 t on September 30.

The United States imported 112,000 t of primary nickel in the first 9 months of 2005, 14% greater than 97,900 t for the corresponding period in 2004. Trade data for October will appear in a subsequent report.

Some of the percentages reported in the first paragraph are based on data concealed to avoid revealing individual company proprietary data.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE¹

(Metric tons, nickel content)

| Period | Cathodes, pellets, briquets, and powder | Ferronickel | Oxide-sinter, salts, and other forms | Total | Total year to date |
|--|--|-------------|---|--------------------|--------------------------|
| 2004: | | | | | |
| October | 5,130 | 734 | 41 | 5,900 | 55,200 |
| November | 4,650 | 504 | 37 | 5,180 | 60,400 |
| December | 4,570 | 482 | 36 | 5,090 | 65,500 |
| January-December | 58,400 | 6,600 | 461 | 65,500 | XX |
| 2005: | | | | | |
| January | 5,270 | 589 | 40 | 5,900 | 5,900 |
| February | 5,150 | 534 | 38 | 5,720 | 11,600 |
| March | 5,160 | 533 | 38 | 5,730 | 17,400 |
| April | 5,540 | 500 | 45 | 6,090 | 23,400 |
| May | 5,210 | 551 | 36 | 5,790 | 29,200 |
| June | 5,630 | 561 | 39 | 6,230 | 35,500 |
| July | 4,960 | 547 | 35 | 5,540 | 41,000 |
| August | 5,310 ^r | 594 | 30 | 5,930 ^r | 46,900 ^r |
| September | 5,370 ^r | 525 | 29 | 5,920 ^r | 52,800 ^r |
| October: | | | | | |
| Steel: | | | | | |
| Stainless and heat resisting | 947 | 281 | W | 1,230 | 13,600 |
| Alloy (excludes stainless) | 668 | 324 | -- | 992 | 8,070 |
| Superalloys | 1,270 | -- | W | 1,270 | 11,400 |
| Copper-nickel alloys | W | -- | -- | W | W |
| Electric, magnetic, and expansion alloys | 12 | -- | -- | 12 | 132 |
| Other nickel & nickel alloys | W | -- | W | W | W |
| Cast iron | W | -- | -- | W | W |
| Electroplating (sales to platers) | 975 | -- | -- | 975 | 8,740 |
| Chemical and chemical uses | W | -- | -- | W | W |
| Other uses | 1,540 | -- | 33 | 1,580 | 16,900 |
| Total reported | 5,420 ² | 605 | 33 | 6,050 | 58,900 |
| Total all companies (calc) ³ | XX | XX | XX | 11,400 | 111,000 |
| 2005: January-October | 53,000 | 5,540 | 365 | 58,900 | XX |
| 2004: January-October | 49,200 | 5,620 | 387 | 55,200 | XX |

¹Revised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Of consumption, 4,260 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

³Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (53.17%) to apparent primary consumption for 2003.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS,
BY FORM AND USE^{1,2}

(Metric tons, nickel content)

| Period | Cathodes, pellets, briquets, and powder | Ferronickel | Oxide-sinter, salts, and other forms | Total |
|--|---|------------------|--|--------------------|
| 2004: | | | | |
| October | 1,410 | 146 | 43 ^r | 1,600 ^r |
| November | 1,360 | 170 | 49 ^r | 1,580 ^r |
| December | 1,450 | 147 | 41 ^r | 1,630 ^r |
| 2005: | | | | |
| January | 1,540 | 192 | 44 ^r | 1,780 ^r |
| February | 1,610 | 226 | 58 ^r | 1,890 ^r |
| March | 1,960 | 221 | 40 ^r | 2,230 |
| April | 1,650 | 183 | 44 ^r | 1,880 ^r |
| May | 1,760 | 198 | 44 ^r | 2,000 ^r |
| June | 1,590 | 215 | 34 ^r | 1,840 ^r |
| July | 1,440 | 217 | 42 ^r | 1,700 ^r |
| August | 1,530 | 215 | 41 ^r | 1,780 ^r |
| September | 1,460 | 161 ^r | 43 ^r | 1,670 ^r |
| October: | | | | |
| Steel (stainless, heat resisting and alloy) | 512 | 141 | (3) | 653 |
| Nonferrous alloys ⁴ | 913 | 20 | (3) | 933 |
| Foundry (cast irons) | (3) | W | -- | (3) |
| Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses | 17 | W | 41 | 58 |
| Total | 1,440 | 161 | 41 | 1,640 |

^rRevised. W Withheld to avoid disclosing company proprietary data. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustments.

³Included in the "Chemical and unspecified uses" category.

⁴Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE¹

(Metric tons, nickel content)

| Period | Consumption | | | Stocks | | |
|------------------|-------------------------------|----------------------------------|----------------|-------------------------------|----------------------------------|--------------------|
| | Ferrous scrap ² | Nonferrous scrap ³ | Total scrap | Ferrous scrap ² | Nonferrous scrap ³ | Total scrap |
| 2004: | | | | | | |
| October | 6,100 | 713 | 6,820 | 3,770 | 70 | 3,840 |
| November | 5,950 | 740 | 6,690 | 3,550 | 63 | 3,620 |
| December | 6,430 | 585 | 7,010 | 3,320 | 65 | 3,390 |
| January-December | 75,100 | 9,330 | 84,400 | XX | XX | XX |
| 2005: | | | | | | |
| January | 5,720 | 648 | 6,370 | 2,330 | 72 | 2,400 |
| February | 4,680 | 736 | 5,420 | 2,440 | 82 | 2,530 |
| March | 4,510 | 799 | 5,310 | 2,490 | 96 | 2,590 |
| April | 4,930 | 762 | 5,700 | 2,510 | 95 | 2,610 |
| May | 3,790 | 776 | 4,560 | 2,620 | 93 | 2,710 |
| June | 4,520 | 698 | 5,220 | 2,810 | 115 | 2,930 |
| July | 4,120 | 658 | 4,780 | 2,740 | 102 | 2,840 |
| August | 4,360 | 748 | 5,110 | 2,630 | 113 | 2,740 |
| September | 4,490 | 709 | 5,200 | 2,800 | 99 ^r | 2,900 ^r |
| October | 5,000 | 638 | 5,640 | 3,010 | 110 | 3,120 |
| January-October | 46,100 | 7,170 | 53,300 | XX | XX | XX |

^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

³Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

| Period and country of origin | Cathodes pellets, and briquets | Powder and flakes | Ferro-nickel | Metal-lurgical-grade oxide | Waste and scrap | Stainless steel scrap | Chemicals | Total ³ | Total year to date ⁴ | Wrought nickel |
|------------------------------|--------------------------------|-------------------|--------------|----------------------------|-----------------|-----------------------|-----------|--------------------|---------------------------------|----------------|
| 2004: | | | | | | | | | | |
| September | 6,590 | 571 | 1,080 | 207 | 689 | 697 | 339 | 10,200 | 112,000 | 88 |
| October | 11,100 | 976 | 1,280 | 210 | 535 | 780 | 321 | 15,300 | 128,000 | 43 |
| November | 9,140 | 659 | 1,240 | 240 | 602 | 696 | 378 | 13,000 | 141,000 | 33 |
| December | 9,380 | 814 | 1,730 | 170 | 403 | 1,340 | 295 | 14,100 | 155,000 | 46 |
| January-December | 107,000 | 9,220 | 13,900 | 1,210 | 7,850 | 11,000 | 4,440 | 155,000 | XX | 796 |
| 2005: | | | | | | | | | | |
| January | 9,040 | 756 | 1,940 | 114 | 585 | 780 | 279 | 13,500 | 13,500 | 40 |
| February | 10,200 | 596 | 2,040 | 122 | 524 | 853 | 360 | 14,700 | 28,200 | 95 |
| March | 7,600 | 1,010 | 1,950 | 488 | 629 | 750 | 334 | 12,800 | 40,900 | 81 |
| April | 11,100 | 813 | 1,820 | 325 | 515 | 1,070 | 316 | 16,000 | 56,900 | 65 |
| May | 9,140 | 866 | 1,260 | 257 | 595 | 831 | 407 | 13,400 | 70,300 | 75 |
| June | 9,010 | 335 | 2,470 | -- | 583 | 776 | 308 | 13,500 | 83,800 | 119 |
| July | 9,050 | 543 | 1,700 | -- | 633 | 624 | 177 | 12,700 | 96,500 | 89 |
| August | 10,500 | 772 | 1,370 | -- | 447 | 402 | 295 | 13,800 | 110,000 | 116 |
| September: | | | | | | | | | | |
| Australia | 938 | 20 | -- | -- | -- | -- | -- | 958 | 9,040 | 10 |
| Brazil | 200 | (5) | -- | -- | 3 | -- | -- | 203 | 821 | -- |
| Canada | 4,720 | 340 | -- | -- | 301 | 319 | -- | 5,680 | 49,600 | (5) |
| Colombia | -- | -- | 246 | -- | -- | -- | -- | 246 | 2,990 | -- |
| Dominican Republic | -- | -- | 1,150 | -- | -- | -- | -- | 1,150 | 12,100 | -- |
| Finland | 241 | 61 | -- | -- | -- | -- | 119 | 421 | 2,770 | -- |
| France | 20 | -- | -- | -- | 80 | -- | 22 | 122 | 1,700 | 5 |
| Germany | -- | 8 | -- | -- | 7 | -- | 43 | 58 | 721 | 67 |
| Japan | -- | 1 | -- | -- | 21 | 1 | 28 | 51 | 453 | (5) |
| Mexico | -- | -- | -- | -- | 21 | 102 | 2 | 125 | 2,050 | -- |
| New Caledonia | -- | -- | 495 | -- | -- | -- | -- | 495 | 1,300 | -- |
| Norway | 1,170 | -- | -- | -- | -- | -- | -- | 1,170 | 15,000 | -- |
| Russia | 2,020 | -- | -- | -- | -- | -- | -- | 2,020 | 17,900 | -- |
| South Africa | -- | 60 | -- | -- | -- | -- | -- | 60 | 550 | -- |
| Sweden | -- | 2 | -- | -- | -- | -- | -- | 2 | 15 | -- |
| United Kingdom | 72 | 1 | -- | -- | 141 | -- | 7 | 221 | 2,120 | 4 |
| Venezuela | -- | -- | -- | -- | -- | 1 | -- | 1 | 238 | -- |
| Zimbabwe | 20 | -- | -- | -- | -- | -- | -- | 20 | 1,260 | -- |
| Other | -- | 7 | -- | -- | 71 | 20 | 73 | 171 | 2,740 | 8 |
| Total | 9,410 | 500 | 1,890 | -- | 645 | 443 | 294 | 13,200 | 123,000 | 94 |
| 2005: January-September | 85,000 | 6,190 | 16,400 | 1,310 | 5,160 | 6,520 | 2,770 | 123,000 | XX | 774 |
| 2004: January-September | 77,400 | 6,770 | 9,680 | 588 | 6,310 | 8,170 | 3,450 | 112,000 | XX | 674 |

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴May include revisions for prior months.

⁵Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

| Period and country of destination | Cathodes pellets, and briquets | Powder and flakes | Ferro-nickel | Metal-lurgical-grade oxide | Waste and scrap | Stainless steel scrap | Chemicals | Total ³ | Total year to date | Wrought nickel |
|-----------------------------------|--------------------------------|-------------------|--------------|----------------------------|-----------------|-----------------------|-----------|--------------------|--------------------|----------------|
| 2004: | | | | | | | | | | |
| September | 112 | 238 | -- | 7 | 1,170 | 2,610 | 498 | 4,640 | 42,400 | 86 |
| October | 60 | 257 | 1 | 2 | 1,110 | 3,620 | 197 | 5,240 | 47,600 | 44 |
| November | 77 | 257 | 1 | 45 | 890 | 2,530 | 285 | 4,080 | 51,700 | 42 |
| December | 27 | 196 | 23 | 98 | 1,030 | 2,980 | 227 | 4,580 | 56,300 | 95 |
| January-December | 972 | 2,130 | 68 | 201 | 12,400 | 35,900 | 4,630 | 56,300 | XX | 1,110 |
| 2005: | | | | | | | | | | |
| January | 37 | 211 | 1 | 161 | 1,230 | 2,400 | 228 | 4,270 | 4,270 | 63 |
| February | 31 | 165 | 3 | 3 | 877 | 3,960 | 316 | 5,360 | 9,620 | 57 |
| March | 91 | 160 | 12 | 7 | 1,070 | 3,990 | 289 | 5,630 | 15,200 | 131 |
| April | 82 | 190 | 6 | 4 | 902 | 5,710 | 344 | 7,230 | 22,500 | 104 |
| May | 84 | 373 | 11 | 2 | 777 | 3,230 | 452 | 4,930 | 27,400 | 129 |
| June | 168 | 176 | 9 | 2 | 523 | 2,950 | 460 | 4,280 | 31,700 | 214 |
| July | 173 | 113 | 4 | 3 | 814 | 3,020 | 335 | 4,460 | 36,200 | 105 |
| August | 91 | 84 | -- | 1 | 1,270 | 3,350 | 506 | 5,300 | 41,500 | 156 |
| September: | | | | | | | | | | |
| Australia | -- | 1 | -- | -- | 41 | -- | -- | 42 | 442 | 3 |
| Belgium | -- | 2 | -- | -- | -- | 2 | 10 | 14 | 216 | -- |
| Canada | 9 | 15 | -- | 1 | 922 | 160 | 69 | 1,180 | 9,470 | 3 |
| China | -- | (4) | -- | -- | -- | 1,810 | 13 | 1,820 | 13,200 | 17 |
| Finland | -- | -- | -- | -- | 49 | 538 | -- | 587 | 4,720 | -- |
| Germany | -- | 6 | (4) | -- | 23 | 15 | 1 | 45 | 670 | 1 |
| India | -- | 2 | -- | -- | 10 | 136 | -- | 148 | 2,220 | 1 |
| Italy | -- | 3 | -- | -- | -- | -- | -- | 3 | 51 | 1 |
| Japan | -- | 4 | (4) | 2 | 13 | 33 | 55 | 107 | 913 | 12 |
| Korea, Republic of | -- | 2 | -- | -- | -- | 237 | 13 | 252 | 3,300 | 7 |
| Mexico | 137 | 13 | -- | -- | 1 | 1 | 7 | 159 | 3,310 | 2 |
| Netherlands | -- | 1 | -- | -- | -- | 50 | 23 | 74 | 459 | -- |
| South Africa | -- | 10 | -- | -- | -- | -- | 1 | 11 | 90 | 15 |
| Spain | -- | -- | -- | -- | -- | 346 | -- | 346 | 365 | -- |
| Sweden | -- | -- | -- | -- | 31 | 1 | -- | 32 | 313 | -- |
| Taiwan | -- | 1 | -- | -- | -- | 452 | 7 | 460 | 4,130 | 10 |
| United Kingdom | -- | 5 | 2 | 2 | 29 | 70 | 24 | 132 | 917 | 2 |
| Other | 1 | 20 | 2 | (4) | 29 | 99 | 92 | 243 | 2,360 | 31 |
| Total | 147 | 85 | 4 | 5 | 1,150 | 3,950 | 315 | 5,650 | 47,100 | 105 |
| 2005: January-September | 906 | 1,560 | 49 | 187 | 8,610 | 32,600 | 3,250 | 47,100 | XX | 1,060 |
| 2004: January-September | 809 | 1,420 | 43 | 56 | 9,380 | 26,700 | 3,920 | 42,400 | XX | 932 |

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

| Period and country of origin | Unwrought alloyed ingot | Bars, rods and profiles | Wire | Plates and sheets | Foil | Tubes and pipes | Other alloyed articles | Total | Total year to date |
|---------------------------------|-------------------------------|-------------------------------|-------|-------------------------|------|-----------------------|------------------------------|--------|--------------------------|
| 2004: | | | | | | | | | |
| September | 528 | 193 | 440 | 192 | 30 | 317 | 79 | 1,780 | 14,700 |
| October | 295 | 285 | 477 | 215 | 7 | 148 | 206 | 1,630 | 16,300 |
| November | 245 | 247 | 624 | 280 | 41 | 246 | 233 | 1,920 | 18,200 |
| December | 269 | 300 | 588 | 226 | 43 | 106 | 145 | 1,680 | 19,900 |
| January-December | 3,000 | 3,120 | 5,740 | 2,590 | 322 | 3,060 | 2,080 | 19,900 | XX |
| 2005: | | | | | | | | | |
| January | 273 | 220 | 600 | 234 | 35 | 67 | 304 | 1,730 | 1,730 |
| February | 329 | 255 | 422 | 257 | 49 | 175 | 202 | 1,690 | 3,420 |
| March: | 361 | 294 | 629 | 316 | 16 | 103 | 173 | 1,890 | 5,320 |
| April | 241 | 338 | 486 | 274 | 33 | 143 | 176 | 1,690 | 7,010 |
| May | 310 | 355 | 662 | 324 | 43 | 148 | 152 | 1,990 | 9,000 |
| June | 437 | 422 | 558 | 260 | 20 | 159 | 237 | 2,090 | 11,100 |
| July | 325 | 342 | 603 | 275 | 29 | 64 | 194 | 1,830 | 12,900 |
| August | 447 | 360 | 462 | 242 | 20 | 171 | 293 | 2,000 | 14,900 |
| September: | | | | | | | | | |
| Australia | 174 | -- | (2) | -- | -- | -- | (2) | 174 | 1,140 |
| Belgium | -- | -- | (2) | -- | -- | -- | (2) | (2) | 81 |
| Canada | -- | 16 | 11 | (2) | (2) | 8 | 18 | 53 | 393 |
| China | -- | (2) | -- | -- | -- | -- | 36 | 36 | 685 |
| France | -- | -- | 100 | 8 | -- | 36 | 7 | 151 | 1,570 |
| Germany | 213 | 197 | 266 | 227 | 32 | 107 | (2) | 1,040 | 7,490 |
| Italy | -- | 32 | -- | -- | -- | 2 | 12 | 46 | 1,170 |
| Japan | -- | -- | 2 | -- | -- | 15 | 3 | 20 | 184 |
| Mexico | -- | -- | -- | -- | -- | 2 | 12 | 14 | 132 |
| Netherlands | -- | (2) | (2) | -- | -- | -- | 2 | 2 | 158 |
| South Africa | 79 | -- | -- | -- | -- | -- | -- | 79 | 355 |
| Sweden | -- | 2 | 112 | 5 | -- | -- | -- | 119 | 1,730 |
| United Kingdom | 132 | 45 | 4 | (2) | 1 | 1 | 6 | 189 | 976 |
| Other | 46 | 22 | 5 | 1 | 1 | 5 | 60 | 140 | 929 |
| Total | 644 | 314 | 500 | 241 | 34 | 176 | 156 | 2,070 | 17,000 |
| 2005: January-September | 3,370 | 2,900 | 4,920 | 2,420 | 279 | 1,210 | 1,890 | 17,000 | XX |
| 2004: January-September | 2,190 | 2,290 | 4,050 | 1,870 | 230 | 2,560 | 1,490 | 14,700 | XX |

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

| Period and country of destination | Unwrought alloyed ingot | Bars, rods and profiles | Wire | Plates and sheets | Foil | Tubes and pipes | Other alloyed articles | Total | Total year to date |
|--------------------------------------|-------------------------------|-------------------------------|-------|-------------------------|------|-----------------------|------------------------------|--------|--------------------------|
| 2004: | | | | | | | | | |
| September | 1,010 | 1,080 | 169 | 389 | 16 | 163 | 257 | 3,090 | 21,900 |
| October | 517 | 776 | 190 | 390 | 26 | 178 | 236 | 2,310 | 24,300 |
| November | 613 | 1,110 | 183 | 327 | 21 | 148 | 256 | 2,660 | 26,900 |
| December | 823 | 1,100 | 157 | 350 | 5 | 150 | 244 | 2,830 | 29,700 |
| January-December | 7,510 | 10,400 | 1,850 | 4,470 | 244 | 1,800 | 3,440 | 29,700 | XX |
| 2005: | | | | | | | | | |
| January | 994 | 1,180 | 84 | 312 | 11 | 226 | 186 | 2,990 | 2,990 |
| February | 910 | 1,050 | 104 | 392 | 10 | 163 | 278 | 2,910 | 5,900 |
| March | 1,200 | 1,350 | 178 | 388 | 7 | 200 | 404 | 3,730 | 9,630 |
| April | 499 | 1,350 | 135 | 340 | 8 | 190 | 281 | 2,800 | 12,400 |
| May | 1,200 | 1,170 | 158 | 378 | 3 | 191 | 268 | 3,370 | 15,800 |
| June | 726 | 1,220 | 108 | 275 | 5 | 216 | 272 | 2,820 | 18,600 |
| July | 1,130 | 1,060 | 170 | 409 | 5 | 211 | 293 | 3,280 | 21,900 |
| August | 1,010 | 1,310 | 114 | 301 | 9 | 285 | 360 | 3,390 | 25,300 |
| September: | | | | | | | | | |
| Australia | -- | 1 | 1 | (2) | -- | 2 | 6 | 10 | 55 |
| Belgium | 68 | 188 | 5 | 23 | (2) | 19 | (2) | 303 | 3,120 |
| Canada | 15 | 39 | 10 | 32 | 1 | 55 | 32 | 184 | 1,660 |
| China | 3 | 124 | 2 | 98 | (2) | 1 | 23 | 251 | 1,720 |
| France | 67 | 167 | 1 | 16 | (2) | 25 | 3 | 279 | 3,740 |
| Germany | 15 | 87 | 12 | 14 | -- | (2) | 9 | 137 | 1,060 |
| India | (2) | (2) | -- | 4 | -- | 1 | (2) | 5 | 356 |
| Ireland | -- | -- | (2) | 1 | 19 | -- | (2) | 20 | 58 |
| Israel | -- | 85 | 5 | 4 | -- | (2) | (2) | 94 | 877 |
| Italy | 1 | 23 | 1 | 2 | -- | 1 | (2) | 28 | 884 |
| Japan | 331 | 77 | 1 | 12 | (2) | 9 | 2 | 432 | 5,390 |
| Korea, Republic of | -- | 6 | (2) | 40 | -- | 14 | (2) | 60 | 616 |
| Mexico | (2) | 54 | 17 | 36 | 3 | 58 | 144 | 312 | 2,720 |
| Netherlands | -- | 6 | -- | 2 | -- | 1 | 2 | 11 | 180 |
| Singapore | (2) | 7 | 1 | 2 | -- | 1 | 1 | 12 | 229 |
| Spain | 17 | -- | (2) | 1 | -- | -- | (2) | 18 | 111 |
| Sweden | -- | -- | (2) | 22 | -- | 3 | 2 | 27 | 207 |
| Switzerland | 28 | 1 | -- | 2 | -- | (2) | (2) | 31 | 187 |
| Taiwan | 1 | 5 | 13 | 4 | -- | 15 | 1 | 39 | 310 |
| United Kingdom | 1 | 301 | 6 | 12 | -- | 5 | 9 | 334 | 2,560 |
| Other | 18 | 75 | 17 | 71 | 3 | 27 | 52 | 263 | 2,100 |
| Total | 565 | 1,250 | 92 | 398 | 26 | 237 | 286 | 2,850 | 28,100 |
| 2005: January-September | 8,240 | 10,900 | 1,140 | 3,190 | 85 | 1,920 | 2,630 | 28,100 | XX |
| 2004: January-September | 5,550 | 7,440 | 1,320 | 3,410 | 191 | 1,330 | 2,700 | 21,900 | XX |

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

| | Percent | |
|-------------------------------------|---------|------|
| | Wrought | Cast |
| October 2005: | | |
| Stainless and heat resisting steels | 100 | (1) |
| Alloy steels | 100 | (1) |
| Superalloys | 91 | 9 |
| Copper-nickel alloys | 95 | 5 |
| Other nickel-base alloys | 100 | (1) |

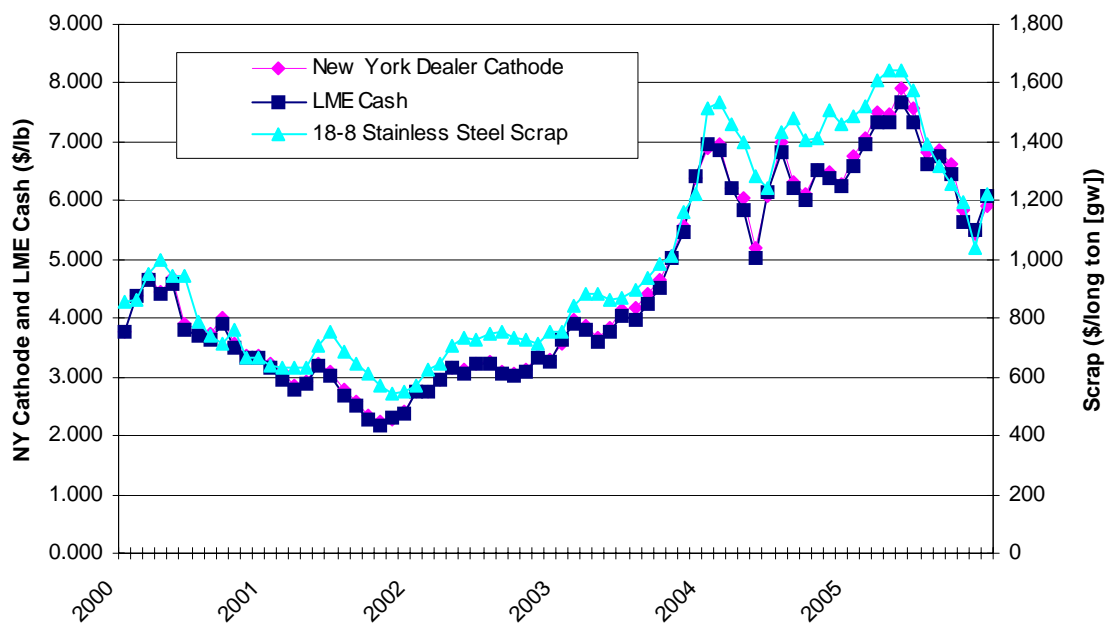
¹Less than ½ unit.

TABLE 9
NICKEL PRICES

| Date | Platts Metals Week | | | | American Metal Market |
|--------------------------|--------------------------------|---------------------------------------|---|--|---|
| | Cathode NY Dealer \$/lb. | LME Cash mean ¹ \$/t | LME Cash mean ¹ \$/lb. | 18/8 Stainless steel scrap Free market \$/long ton (gw) | 18/8 Stainless steel scrap Pittsburgh \$/long ton (gw) |
| 2004: | | | | | |
| Average for month of: | | | | | |
| October | 6.523 | 14,404.286 | 6.534 | 1,413 | 1,470 |
| November | 6.488 | 14,045.455 | 6.371 | 1,506 | 1,562 |
| December | 6.286 | 13,768.810 | 6.245 | 1,457 | 1,523 |
| Yearly average | 6.341 | 13,823.241 | 6.270 | 1,427 | 1,473 |
| 2005: | | | | | |
| Average for week ending: | | | | | |
| October 7 | 6.25-6.42 | 13,245.500 | 6.008 | 1,175-1,225 | 1,375-1,400 |
| October 14 | 5.89-6.19 | 12,568.000 | 5.701 | 1,175-1,225 | 1,325-1,350 |
| October 21 | 5.71-5.87 | 12,078.500 | 5.479 | 1,175-1,225 | 1,325-1,350 |
| October 28 | 5.51-5.68 | 11,788.500 | 5.347 | 1,150-1,200 | 1,325-1,350 |
| November 4 | 5.47-5.68 | 11,616.500 | 5.269 | 1,000-1,050 | 1,325-1,350 |
| November 11 | 5.54-5.77 | 11,877.500 | 5.388 | 1,000-1,075 | 1,200-1,225 |
| November 18 | 5.26-5.44 | 11,845.500 | 5.373 | 950-1,075 | 1,200-1,225 |
| November 25 | 5.44-5.60 | 12,635.500 | 5.731 | 1,050-1,100 | 1,200-1,225 |
| December 2 | 5.72-5.90 | 12,766.000 | 5.791 | 1,075-1,175 | 1,200-1,225 |
| December 9 | 5.74-6.18 | 13,517.500 | 6.131 | 1,175-1,225 | 1,175-1,200 |
| December 16 | 6.10-6.40 | 13,790.500 | 6.255 | 1,250-1,300 | 1,175-1,200 |
| December 23 | 6.13-6.27 | 13,308.500 | 6.037 | 1,225-1,300 | 1,175-1,200 |
| December 30 | 5.93-6.12 | 13,367.500 | 6.063 | 1,225-1,300 | 1,175-1,200 |
| Average for month of: | | | | | |
| January | 6.748 | 14,501.250 | 6.578 | 1,487 | 1,513 |
| February | 7.065 | 15,344.625 | 6.960 | 1,520 | 1,513 |
| March | 7.510 | 16,184.524 | 7.341 | 1,609 | 1,563 |
| April | 7.480 | 16,136.429 | 7.319 | 1,647 | 1,685 |
| May | 7.920 | 16,919.750 | 7.675 | 1,645 | 1,629 |
| June | 7.564 | 16,154.432 | 7.328 | 1,578 | 1,610 |
| July | 6.820 | 14,570.833 | 6.609 | 1,390 | 1,538 |
| August | 6.863 | 14,886.932 | 6.753 | 1,315 | 1,388 |
| September | 6.610 | 14,223.088 | 6.451 | 1,260 | 1,388 |
| October | 5.840 | 12,396.548 | 5.623 | 1,194 | 1,350 |
| November | 5.429 | 12,111.477 | 5.494 | 1,038 | 1,244 |
| December | 5.923 | 13,425.625 | 6.090 | 1,225 | 1,193 |

¹Mean of the cash buyer price and the cash seller and settlement price.

2000-2005 AVERAGE MONTHLY PRICES (Derived from Metals Week and American Metal Market quotations)



2000-2005 STOCKS

